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BECAUSE EVERY CHIROPRACTOR NEEDS A HAND.

The Obese Child

by Claudia Anrig, DC

Whether you are dropping your child off at school, walking through an amusement park or entertainment complex, or merely strolling down your hallway to give an adjustment, you can't help but notice the rise of obesity in children. What was once rarely seen in children 20-30 years ago has become an epidemic in our country and around the world.

In 1998, the World Health Organization designated obesity as a global epidemic. It is the most common nutritional disorder in developed countries, and one of the most common chronic illnesses in the Western world.

In the United States, childhood obesity has doubled in the past 20 years: Of children between 6-11 years of age, 15.3% are at or above the 95th percentile of the body mass index (BMI) on standard growth charts based on reference data from the 1970s.^{1,2} Of children 12-19 years of age, 15.5% are in this category. Recent data revealed by the Centers for Disease Control and Prevention indicates that children younger than 5 years of age, across all ethnic groups, have a significant increase in overweight and obesity.

Other Westernized cultures are also seeing the same alarming trend. Childhood obesity in Canada has tripled over the past 20 years. Obesity among children 7-13 years of age rose from 5% in 1981 to 17% in 1996 for boys, and 15% for girls.³ England, Scotland and Spain are also recognizing this problem and attempting to tackle the battle of the bulge.

The health impact of obesity is staggering, creating significant health problems that place this population group (the obese) in a higher risk factor for adult morbidity and mortality.^{4,5} Health problems associated with obesity in children and adolescents can create a wide spectrum of illnesses: cardiovascular diseases of hypercholesterolemia, dyslipidemia and hypertension,⁶⁻⁹ with endocrine system hyperinsulinism; insulin resistance; impaired glucose tolerance; type 2 diabetes mellitus; menstrual irregularity;^{10,11} depression; and low self-esteem.^{12,13}

It is recommended that all obese adolescents be evaluated for type 2 diabetes mellitus, particularly if the family has a history of early onset (younger than 40 years) of this disorder.

Other associated complications of obesity include asthma; obstructive sleep apnea; genu varum; slipped capital femoral epiphysis; and nonalcoholic steatohepatitis.

The likelihood of childhood obesity persisting in adulthood is very gloomy. Children who are obese at the age four have a 20% possibility of developing adult obesity, and those who are overweight during their adolescence increase their risk of developing adult obesity to 80%.¹⁴ The future health care costs associated with childhood obesity and its comorbidities are great. In the U.S., obesity health problems represent greater than 5% of the total health care costs. The Surgeon General predicts that preventable morbidity and mortality from obesity may

exceed that related to cigarette smoking.^{2,15}

There are genetic conditions associated with obesity (Prader-Willi, Bardet-Biedl and Cohen syndromes) that, when caught early, can be treated with a multidisciplinary approach to help the child adapt. The role of hormonal and neurochemical mechanisms that promote energy imbalance that contributes to obesity has yet to be understood and continues to be studied.

Although there are many issues surrounding obesity - interactions between genetic, biological, psychological, sociocultural and environmental factors - I'd like to introduce a few areas in which the family-centered chiropractic practice may help parents and their children.

By no means is the chiropractor attempting to substitute the role of the medical care provider. However, the family-centered chiropractic practice, due to the simple nature of ongoing care, and typically, adherence to a wellness model, can provide the parents and children with recommendations and encouragement for lasting change.

Early intervention against obesity can begin prior to conception by educating future parents of the risks of high birth weight, maternal diabetes and obesity of family members. With earlier counseling to change the health lifestyle of both parents prior to a pregnancy, a child has a greater chance to avoid obesity later in life. With parents being introduced to a lifestyle of healthier eating habits (which is in a very sad state in the U.S.) and increasing their exercise activity, their model is a hedge against their children struggling with being overweight in life.

Studies have shown that if a young child has one obese parent, that child will have three times the likelihood of developing adult obesity. Should both parents be obese, the odds increase to 10 times the likelihood.¹⁶

Breastfeeding has been proven to decrease the chances of obesity. Encouraging expectant mothers to increase the length of their breastfeeding time may play an important part in reducing childhood obesity. Children whose mothers exclusively breastfed for three to five months had a 35% lower risk of obesity at the ages of 5-6.¹⁷ Another study found that infants who were breastfed over longer periods, or who were breastfed milk more than infant formula, also had a lower risk of being overweight during childhood and adolescence.¹⁸

Motion is life, and many children lack enough physical activity to warrant the amount of caloric intake they are consuming. Less playtime on the school grounds (during and after school), the decrease of fitness programs, and the increase of bus or automobile transportation to and from school, rather than walking or bicycling, have all contributed to this shift of inactivity. Replacing children's physical activity with television, video and computer games has not helped the matter.

One national survey indicated that 20% of U.S. children ages 8-16 reported fewer than two periods of vigorous physical activity a week, with an increase of 25% of the pediatric population watching more than four hours of television a day.¹⁹ Children who watch four hours of television a day have a dramatic increase in BMI, compared to those who watch two hours of TV per day. To compound the problem, having a TV in the bedroom has been reported to be a strong indicator of being overweight, even in preschool-aged children.¹⁹

"You are what you eat" is a great adage. With the decrease of family meals together and the increase of carbohydrate- and fat-content foods, gone are the days of seeing children eat healthier portions of vegetables, fruits and whole grains.

Our goal for parents should be to encourage healthy behaviors for the entire family. Start with a baseline; take a look at the BMI of the child (www.cdc.gov/growthcharts), and periodically monitor his or her progress.

Ask parents to keep a family journal of food and activity (TV, physical activity, etc) for an entire week; evaluate

it with them and give them advice how to begin their journey to an improved lifestyle.

For example, if you have a family that eats at home together one or two times a week, and watches four to five hours a day of TV per night, encourage members to expand their sit-down family meals to four times a week. Recommend slowly reducing the television/computer time two hours a day (and definitely not during the dinner hour), and encourage a family walk or bike ride 30 minutes a day. Set easy, attainable goals and recheck the family's progress every four to six weeks.

The wellness model has always been a hallmark for the family-centered chiropractic practice. Take a leadership role by promoting better health and lifestyle habits that reduce the potential development of obesity and its associated health risks.

References

1. Himes JH, Dietz, WH. Guidelines for overweight in adolescent preventive services: recommendations from an expert committee. *AM J Clinical Nutr.* 1994; 59:307-316.
2. U.S. Dept Health and Human Services. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity.* Rockville, Md.: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General;2001.
3. Spurgeon D, Childhood obesity in Canada has tripled in past 20 years, *BMJ* 2002;324:1416 (15 June).
4. Freedman DS, et al. The relation of overweight to cardiovascular risk factors among children and adolescents: the Bogalusa heart study. *Pediatrics* 1999; 103:1175-1182.
5. Must A, et al. Long-term morbidity and mortality of overweight adolescents. A follow-up of the Harvard Growth Study of 1922 to 1935. *N Engl J Med* 1992;327:1350-1355.
6. Gidding SS, et al. Effects of secular trends in obesity on coronary risk factors in children: the Bogalusa Heart Study. *J Pediatr* 1995;127:868-874.
7. Clarke WR, et al. Changes in ponderosity and blood pressure in childhood: the Muscatine Study. *Am J Epidemiol* 1986;124:195-206.
8. Johnson AL, et al. Influence of race, sex and weight on blood pressure behavior in young adults. *Am J Cardiol* 1975;35:523-530.
9. Morrison JA, et al. Lipids, lipoproteins, and sexual maturation during adolescence: the Princeton Maturation Study. *Metabolism.* 1979;28:641-649.
10. Shinha R, et al. Prevalence of impaired glucose tolerance among children and adolescents with marked obesity. *N Engl J Med* 2002;346:802-810.
11. Pinhas-Hamiel O, et al. Increased incidence of non-insulin-dependent diabetes mellitus among adolescents. *J Pediatr* 1996;128:608-615.
12. Strauss RS. Childhood obesity and self-esteem. *Pediatrics* 2000;105(1).
13. Davison KK, Birch LL. Weight status, parent reaction, and self-concept in five-year-old girls. *Pediatrics* 2001;107:46-53.
14. Guo SS, Chumlea WC. Tracking of body mass index in children in relation to overweight in adulthood. *Am J Clin Nutr* 1999;70(suppl):145S-148S.
15. Wolf AM, Colditz GA. Current estimates of the economic cost of obesity in the United States. *Obes Res* 1998;6:97-106.
16. Whitaker RC, et al. Predicting obesity in young adulthood from childhood and parental obesity. *N Engl J Med* 1997; 337:869-873.
17. Von Kries, et al. Breast-feeding and obesity: cross sectional study. *BMJ* 1999;319:147-50.
18. Gilman MW, et al. Risk of overweight among adolescents who were breastfed as infants. *JAMA* 2001;285 :2461-7.
19. Anderson RE, et al. Relationship of physical activity and television watching with body weight and level of fatness among children: results from the Third National Health and Nutrition Examination Survey. *JAMA* 1998;279:938-942